

## ABSTRACT OF THE DISCLOSURE

The present invention provides for a reconfigurable packet classifier using  
5 CAM. The invention is directed to packet classification for switching/routing systems  
where the router's system resources are limited and the customer requirements from  
the router are variable. . The invention addresses the CAM constraint (e.g. search key  
width) problems of CAM-based classification systems, by allowing a reconfigurable  
selection of packet fields and/or payload bits to be used in the definition of the search  
10 key. For any given incoming packet, a subset of that incoming packet may be  
statically chosen to fit that particular CAM architecture and to create a particular  
CAM search key. This provides router deployment flexibility within networks and,  
thus, cuts costs.